

## Russell County

### Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

6/28/2017

Using the most recent IMPLAN data available (2015) adjusted for 2017, 15 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Russell County economy.<sup>1</sup>

These 15 sectors have a total direct output of approximately **\$246.7 million** and support **688.2 jobs** in Russell County. Running the model for all 15 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Russell County Economy						
Impact Type <sup>2</sup>	Employment	% Employment	Total Value Added <sup>3</sup>	Total Value Added % of Gross Regional Product <sup>4</sup>	Output <sup>5</sup>	Output % of Gross Regional Product
Direct Effect	688.2	16.13%	\$41,800,724	12.31%	\$246,667,222	72.67%
Indirect Effect	152.8	3.58%	\$11,903,664	3.51%	\$25,772,081	7.59%
Induced Effect	125.4	2.94%	\$6,843,294	2.02%	\$13,328,897	3.93%
<b>Total Effect</b>	<b>966.3</b>	<b>22.65%</b>	<b>\$60,547,681</b>	<b>17.84%</b>	<b>\$285,768,201</b>	<b>84.18%</b>

As shown in the above table, agriculture, food, and food processing sectors support **966.3 jobs**, or **22.65%** of the entire workforce in the county. These sectors provide a total economic contribution of approximately **\$285.8 million**, **roughly 84.18% of the economy**.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 15 agriculture, food, and food processing sectors is approximately **\$60.5 million**, or **17.84% of the GRP**. This indicates that personal income, business income, and taxes generated by these sectors account for **17.84% of the total economy**.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

<sup>1</sup> Article on building a contribution analysis in IMPLAN that avoids double counting:

[http://www.implan.com/index.php?option=com\\_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70](http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70)

<sup>2</sup> Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

<sup>3</sup> Value added = labor income + indirect business taxes + other property type income.

<sup>4</sup> GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

<sup>5</sup> Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector is the top employer with **258.8 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Russell County.

Top Ten Agriculture, Food, and Food Processing Sectors by Employment		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	258.8	\$29,743,608
Other animal food manufacturing	97.5	\$134,210,680
Grain farming	81.9	\$29,323,983
Animal production, except cattle and poultry and eggs	68.0	\$8,867,655
All other crop farming	58.7	\$4,320,990
Wholesale trade	56.6	\$10,634,732
Farm machinery and equipment manufacturing	50.5	\$27,399,499
Landscape and horticultural services	38.0	\$993,659
Dairy cattle and milk production	18.1	\$7,715,358
Full-service restaurants	15.6	\$672,740

The other animal food manufacturing sector directly contributes approximately **\$134.2 million** to the Russell County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Agriculture, Food, and Food Processing Sectors by Output		
Sector	Total Employment	Total Output
Other animal food manufacturing	97.5	\$134,210,680
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	258.8	\$29,743,608
Grain farming	81.9	\$29,323,983
Farm machinery and equipment manufacturing	50.5	\$27,399,499
Wholesale trade	56.6	\$10,634,732
Animal production, except cattle and poultry and eggs	68.0	\$8,867,655
Dairy cattle and milk production	18.1	\$7,715,358
All other crop farming	58.7	\$4,320,990
Petroleum refineries	0.6	\$3,155,404
Owner-occupied dwellings	0.0	\$3,153,096

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Russell County economy.

<b>All Agriculture, Food, and Food Processing Sectors</b>		
<b>Sector</b>	<b>Total Employment</b>	<b>Total Output</b>
Oilseed farming	2.3	\$2,430,872.92
Grain farming	81.9	\$29,323,982.24
Vegetable and melon farming	0.6	\$141,087.90
Greenhouse, nursery, and floriculture production	1.4	\$233,023.52
All other crop farming	58.7	\$4,320,990.09
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	258.8	\$29,743,606.57
Dairy cattle and milk production	18.1	\$7,715,357.78
Poultry and egg production	0.2	\$156,366.14
Animal production, except cattle and poultry and eggs	68.0	\$8,867,654.80
Other animal food manufacturing	97.5	\$134,210,678.10
Bread and bakery product, except frozen, manufacturing	4.0	\$431,948.04
Frozen cakes and other pastries manufacturing	0.2	\$34,485.89
Farm machinery and equipment manufacturing	50.5	\$27,399,499.89
Veterinary services	7.9	\$664,005.46
Landscape and horticultural services	38.0	\$993,659.02

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Russell County, the retail sector was omitted.